## A NEW SPECIES OF MICRACANTHIA REUTER FROM OREGON (HETEROPTERA: SALDIDAE)

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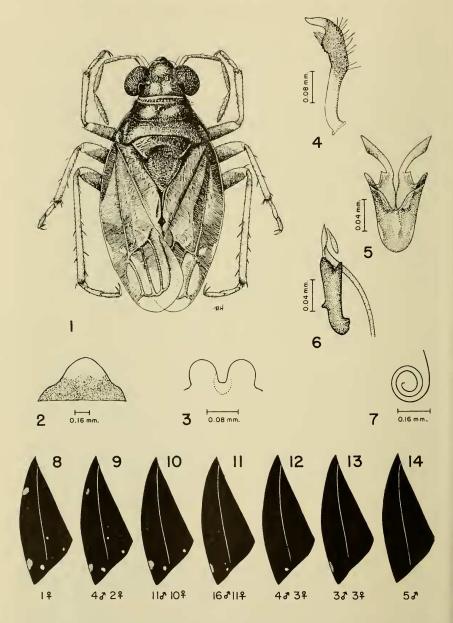
The genus Micracanthia Reuter is chiefly Holarctic in distribution. Three species are known from Europe and Asia, ten from North America including the Caribbean Islands and one from South America. Although most of the North American species are found in central and southern United States, there are a few that are more boreal in their distribution, at least one reaching Alaska. The three Old World species belong to this latter category, suggesting dispersal north and west across the Bering Strait into northern Asia and Europe. The fact that the genus does not penetrate into the lower latitudes in the Palaearctic region suggests that this dispersal occurred during a time when the Bering region was cool to cold, perhaps during the Pleistocene. M. fennica (Reuter) is the only species now known to be Holarctic. Although only one species is known from South America, additional species are likely to be found.

Most workers have considered *Micracanthia* to be a valid genus, but Cobben (1960a) has questioned its status, suggesting that this taxon might be a subgenus of *Saldula* Van Duzee. Several characters have been used to separate *Micracanthia* from *Saldula*, these include: reduced nature of the hemelytral veins, the unforked medial vein on the hemelytra and the small size of most species. There are some species of *Saldula* with reduced veins (R. H. Cobben, personal communication); when the inner surface of the hemelytron is examined, the medial vein is branched; and there are small species of *Saldula*. The establishment of generic limits in the Saldidae is a very difficult problem (*vide* Cobben, 1959). A careful comparison of critical characters of all members of *Micracanthia* is needed to establish the proper status. At some future date it may be necessary to alter our present concept.

## Micracanthia schuhi, n. sp.

Head: Black, surface roughened; dorsally with short, semi-adpressed golden pubescence, ventral surface with longer, semi-erect white pubescence; transverse swelling, maxillary plates, anteclypeus and median portion of labrum, glabrous. Three pairs of trichobothria, anterior pair shortest; round yellow spot between ocellus and eye. Male with transverse swelling (except at middle), base of mandibular plates, maxillary plates, anteclypeus (except base) yellow; female

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Figs. 1–14, Micracanthia schuhi, n. sp.: 1, holotype male, dorsal view; 2, female subgenital plate, ventral view; 3, parandria of male, posterior view; 4, male paramere, lateral view; 5, median sclerotized structures of aedeagus, frontal view; 6, median sclerotized structures of aedeagus, lateral view; 7, base of penis filum, lateral view; 8–14, eunomic series of hemelytra.

with transverse swelling black except for small brown spot laterad, mandibular plates pale basally, anteclypeus brown except extreme apex, labrum yellow-brown in center. Antennae: dark brown, segment 1 pale on inner surface, segments 2, 3 and 4 concolorous; clothed with short, semi-erect pale pubescence, segments 3 and 4 with scattered, erect black setae. Rostrum attains hind coxae.

Thorax: Pronotum and scutellum black, with short, adpressed golden pubescence, pubescence white along lateral margin of pronotum, lateral onethird of collar and on venter; surface finely rugulose, semi-shining; posterior third of scutellum transversely rugulose. Pronotum transverse, anterior margin straight, collar set off by distinct transverse row of coarse punctures; anterior angle rounded, slightly protruding; lateral margins strongly convergent, straight to very lightly convexly arcuate; posterior angle slightly obtuse, very narrowly rounded; posterior margin broadly and deeply concave except at lateral one-fifth. Scutellum very slightly wider than long; anterior third slightly raised, posterior margin of anterior third convex medially; posterior two-thirds slightly swollen. Venter black, polished. Legs with all coxae black, very narrowly pale at apices; trochanters light brown, pale anteriorly; anterior and middle femora blackbrown, narrowly pale at apex, apical one-third of dorsum pale; tibia pale yellow-brown, darker at apex and base, faint brown median band, spines on hind tibia brown-black; first 2 tarsal segments pale, third segment embrowned apically (coloration of female legs more distinct than in male).

Hemelytra: Macropterous; scattered adpressed yellow pubescence in addition to short, decumbent black hairs; surface dull black, costal margin narrowly semi-shining; faint pale spot at apex of clavus, white spot at postero-median angle of exocorium, yellow-brown costal spot just before apex (rarely with second yellow-brown pale spot on basal third), membrane embrowned with faint pale spots in cells (eunomic variation of narrow range, see figs. 8–14).

Abdomen: Black, with fine yellow-brown pubescence, posterior margins of segments narrowly pale. Subgenital plate of female posteriorly produced in middle (fig. 2), black basally, produced portion yellow-brown. Parandria of male black (fig. 3). Male paramere (fig. 4) broadest through processus sensualis; processus hamatus slightly recurved, acuminate. Base of penis filum coiled two and one-half times (fig. 7); median sclerotized structure of penis as illustrated (figs. 5, 6); organization typical for *Micracanthia* but details differ (vide Cobben, 1960 b, p. 60, fig. 58).

Measurements: Male (34 examples) length  $2.64-3.13~\mathrm{mm}$  (mean  $2.87~\mathrm{mm}$ ; SD .13 mm); width  $1.27-1.43~\mathrm{mm}$  (mean  $1.38~\mathrm{mm}$ ; SD .06 mm); Female (20 examples) length  $2.86-3.35~\mathrm{mm}$  (mean  $3.09~\mathrm{mm}$ ; SD .14 mm); width  $1.43-1.76~\mathrm{mm}$  (mean  $1.58~\mathrm{mm}$ ; SD .09 mm).

Holotype: Male, Oregon, Clackamas County, Still Creek, 2 mi. E. Government Camp, Timberline Lodge Road (Mt. Hood), 4350 ft., August 10, 1964, J. D. Lattin and T. Schuh. USNM 69874.

Allotype: Female, same data as holotype.

Paratypes: 42 males, 29 females; same data as holotype; Oregon, Hood County, Iron Creek, 2 miles N. Bennett Pass (Mt. Hood), 4259 ft., August 10, 1964, J. D. Lattin and T. Schuh; Oregon, Mt. Hood, Clackamas County, 4100 ft., K. Goeden (same as type locality);

Oregon, Linn County, 1 mi. S. Marion Forks, July 18, 1965, K. Goeden. Paratypes deposited in: U. S. National Museum; California Academy of Sciences, San Francisco; Canadian National Collection of Insects; University of Kansas, Lawrence; Oregon State University, Corvallis; Oregon Department of Agriculture, Salem; and the personal collec-

tions of R. H. Cobben, J. T. Polhemus and J. Schuh.

M. schuhi may be recognized by the distinctive eunomic pattern of the hemelytra, the scattered golden pubescence of the dorsum, the straight-sided pronotum and the distinctive male and female genitalia. It appears most closely related to M. ripula Drake, described from Churchill, Manitoba. Female homeotypes, compared by John T. Polhemus and kindly sent to me by Randall T. Schuh, were used for comparison. I have since examined the type of ripula at the Canadian National Collection of Insects (through the courtesy of L. A. Kelton). M. schuhi differs from ripula in having the female genital plate more strongly produced posteriorly and yellow-brown instead of white; more deeply arcuate posterior margin of the pronotum; eunomic variation (vide Brooks and Kelton, 1967, fig. 118 and Schuh, 1967, fig. 29 for ripula); distinctly golden hemelytral pubescence, particularly on clavus compared to silver-white to soiled yellow pubescence in ripula; the semi-shining condition of pronotum and scutellum as opposed to rugulose, dull surface of ripula.

Micracanthia schulii represents a cool adapted segregate of the genus. At present known only from the northern Cascade Mountains of Oregon around the 4000 ft. level, it seems likely that it will be recovered from other localities within the range. M. ripula has a much wider distribution, being known from British Columbia (Scudder, 1961); Yukon Territory, Alberta, Saskatchewan and Manitoba (Brooks and Kelton, op. cit.) and northern Michigan (Schuh, op. cit.).

The new species occupies a very uniform habitat, a uniformity further expressed by the small amount of eunomic variation. It was collected from sphagnum-type moss at the edge of several small mountain creeks and was not found in more exposed situations so typical of many species of saldids. Specimens were driven out of the moss with smoke and alcohol spray and easily collected with an aspirator. At one site (Still Creek), the water temperature was 43.5°F. This normally would produce a very cool microenvironment, but when the sun hit this spot for a short time around noon the temperature in the moss just below the surface averaged 90°F. By slight movement within the moss the saldids could select an area of optimal temperature. The other species of *Micracanthia* personally collected by me have preferred a damp substrate with some scattered cover but never as dense as that found for *M. schuhi*. In that respect, it resembles *M. fennica* (Reuter), a species normally found in bogs and moors in

Europe although Brooks and Kelton (op. cit.) record it from grassy lake margins and mossy edges of ditches. M. ripula has been collected from a sandy substrate with scattered cover (Schuh, op. cit.) and Brooks and Kelton recorded it from essentially the same type of habitat.

Although the North American saldid fauna is fairly well known, collectors are urged to seek out the less obvious habitats for additional species certain to be found. Only then will a complete analysis of our fauna be possible.

This is, in a sense, a triple patronymic. It is dedicated to Randall T. (Toby) Schuh, my very able assistant who helped collect so many specimens of Saldidae including this new species; to Mr. Joe Schuh, an old friend and field companion who has provided me with so many specimens of Oregon Heteroptera during the past years; and to Mrs. Joe Schuh who has maintained such a favorable "habitat" for entomologists in her home besides being very active in 4-H entomology work.

I am indebted to Mrs. James (Bonnie) Hall for the fine illustrations of this new species.

## REFERENCES

- Brooks, A. R. and L. A. Kelton. 1967. Aquatic and semiaquatic Heteroptera of Alberta, Saskatchewan, and Manitoba (Hemiptera). Mem. Ent. Soc. Can. No. 51:92 pp.
- Cobben, R. H. 1959. Notes on the classification of Saldidae with the description of a new species from Spain. Zool. Meded. Leiden 36(22):303–316.
- 1960a. Die Uferwanzen Europas. Hemiptera-Heteroptera Saldidae.
  in W. Stichel, Illus. Bestimmungstabellen der Wanzen, II. Europa, III:209–263.
  1960b. The Heteroptera of the Netherlands Antilles—III, Saldidae (Shore Bugs). In Studies on the fauna of Curacao and other Caribbean islands, The Hague, vol. 11 (52):44–61.
- Drake, C. J. 1957. An undescribed shore-bug from Manitoba (Hemiptera, Saldidae). Bull. So. Calif. Acad. Sci. 56(3):142–143.
- Schuh, T. 1967. The shore bugs (Hemiptera: Saldidae) of the Great Lakes Region. Contr. Amer. Ent. Inst. 2(2):1–35.
- Scudder, G. G. E. 1961. Some Heteroptera new to British Columbia. Proc. Ent. Soc. British Columbia 58:26–29.